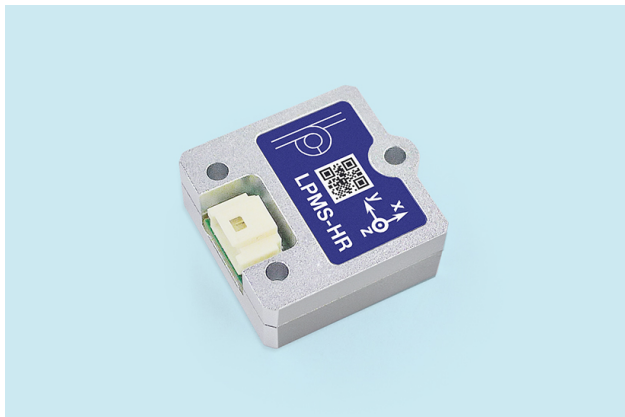


LPMS-HR



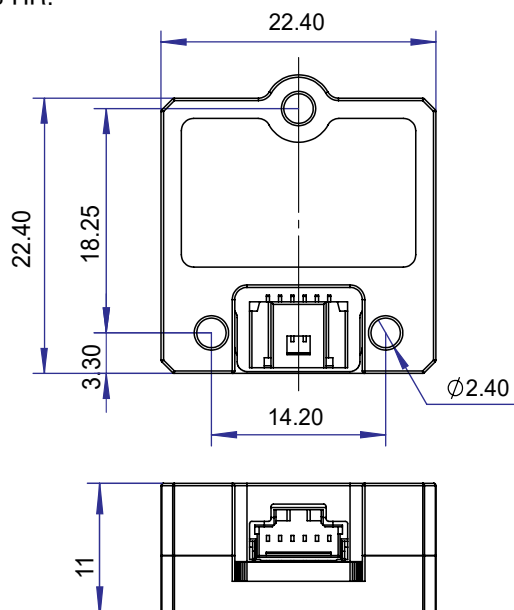
Miniature high-precision motion sensor

LPMS-HR Series is a high-precision motion sensor specially developed specifically for the robotics field. It integrates a three-axis accelerometer and a three-axis gyroscope, and uses our proprietary fusion algorithms to perform accurate orientation computation. The sensor supports up to 1000Hz data output rate, suitable for robotic applications that require high data rate.



Dimensions

LPMS-HR:



Specifications

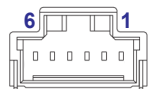
Part Number	LPMS-HR
Dimensions	22.4x22.4x11mm
Weight	10g
Baudrate*	115200 bps
Orientation range	Roll: $\pm 180^\circ$ Pitch: $\pm 90^\circ$ Yaw: $\pm 180^\circ$
Resolution	0.01°
Accelerometer	3-axis, $\pm 3 / \pm 6 / \pm 12 / \pm 24g$, 16bits
Acc. zero-g offset	20mg
Zero-g offset temp. drift	<0.2mg/K
Gyroscope	3-axis, $\pm 125 / \pm 250 / \pm 500 / \pm 1000 / \pm 2000dps$, 16bits
Gyro zero rate offset	$\pm 1dps$
Gyro zero rate temp. drift	$\pm 0.015dps/K$
Gyro noise density	0.014dps/ $\sqrt{Hz}$
Output data	Raw Data/Euler/Quaternion/Linear Acc./Temperature
Maximum data output rate	1000Hz
Power consumption**	USB: 0.13W(26mA@5V) RS232: 0.105W(21mA@5V) TTL: 0.095W(19mA@5V)
Input Voltage***	5~36V DC
Case	Aluminum
Temperature range	-40~85°C
Connector	Molex 5015680607

* Default baudrate. Supports up to 921600bps

** Performance parameters are measured at +25°C

*** For USB version, max. input voltage is 5V

Pinout



Pin	Name	Remarks
1	VCC	5V(USB) ; 5~36V(RS232/TTL)
2	GND	Ground
3	D-/ RS232_TX / UART_TX	-
4	D+/ RS232_RX / UART_RX	-
5	NRST	Active Low, <1.1V
6	SYNC	Sync Input

Applications

- Humanoid robot
- Autonomous robot

Hardware Package

- LPMS-HR Sensorx1
- Data cablex1
- Packaging box x1
- Warranty (1 Year)